

IN THE US PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF

Jean-Pierre Wolf et al.

SERIAL NO. 10/556,609

FILED: 11/15/2005

FOR: Strongly adhering surface coatings

GROUP ART UNIT: 1792

EXAMINER: Joel G. Horning

Commissioner of Patents and Trademarks

Washington D.C. 20231

DECLARATION UNDER RULE 132

I, Stephan Ilg, a citizen of the Swiss confederation, residing in Giebenach, Switzerland, hereby declare,

that I have absolved the technical school of Swiss Coating and Dyes Association and was awarded the degree of Lacklaborant (technical assistant in the field of coatings);

that I have absolved the technical school of Ciba-Geigy AG with the degree of Cheflaborant (senior technical assistant);

that I have been employed by Ciba-Geigy AG, Basle, since 1967 as Laborant (technical assistant) and since 1985 as Cheflaborant (senior technical assistant) and held the position of a laboratory chief in the Department for Imaging and New-Technology in the Additives Division of Ciba until my retirement in 2007;

that I have been engaged in the field of coating technology since 1978 and in the field of photohardening of coatings since 1980; and

that the experiments described below have been carried out under my supervision.

That I'm familiar with U.S. Patent Application Serial No. 10/225,609 to JEAN-PIERRE WOLF et al. and that I supervised the tests described below.

It was object of the experiment to give a documentation of the difference in performance between *"a process for the production of strongly adherent coatings"*, wherein the photoinitiator applied as a "primer" to a pre-treated substrate is fixed via an irradiation step according to **US Application No. 10/556,609** and a corresponding process, wherein said irradiation step is not performed as described in **US 6548121 (BAUER)**.

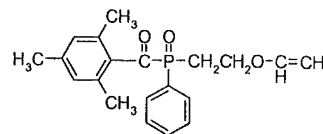
TEST

Adhesion of a blue printing ink

(1) Process according to the invention with irradiation step c):

A biaxial oriented polypropylene (BOPP, Exxon Mobil) film is subjected to a corona treatment at a belt speed of 3 m/min and an output of 500 W and

then coated with a solution of 0.5 % of the initiator



and 4 % polyethyleneglycol diacrylate, SR® 344 (Sartomer) in isopropanol using a 4 µm wire bar.

After drying, the film is exposed by means of a mercury medium pressure lamp (120 W/cm) at a belt speed of 50 m/min.

An approximately 1-2 µm thick layer of a UV-curable blue flexo printing ink (Gemini Flexo Cyan, Akzo) is printed onto the resulting treated films by means of an Prüfbau Probedruckmaschine. The layer is cured by means of a mercury medium pressure lamp (120 W/cm) at a belt speed of 50 m/min.

The adhesion properties are tested by tearing off an adhesive tape strip applied to the cured formulation.

Evaluation of said test is indicated by a scale 0-5, with 0=no detachment and 5 = complete detachment.

The results are summarized below.

(2) Process according to the prior art without the irradiation step c):

The procedure as described above is repeated, however the irradiation step after drying of the primer coating is omitted.

The results are collected below.

RESULTS

According to the Application:

with irradiation step c)

value on scale: = 2

According to *BAUER*

without irradiation step c)

value on scale = 5

DISCUSSION OF RESULTS

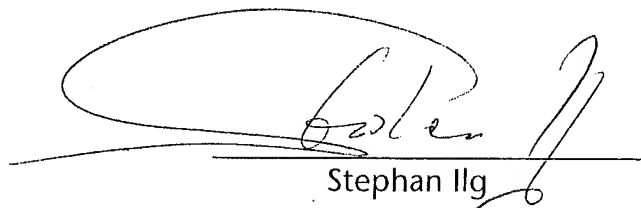
As can be seen from the results a coating prepared according to the process as claimed in Application No. 10/556,609 is adhering to the surface, while a coating prepared according to the process of *BAUER*, without the irradiation step, is detached completely. Accordingly, sufficient adhesion is not given.

It is surprising that according to the present process an improvement of such an extent could be achieved. This fact could not be derived in an obvious manner from the teachings of *BAUER*.

more than double as well as

I further declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Signed this 12. day of May 2009



Stephan Ilg